APRIL/MAY 2025

# FEL53/CEL53/BEL53 — ELECTRICAL AND ELECTRONIC INSTRUMENTATION

Time : Three hours Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

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1. What is gross error?
2. Define thermocouple.
3. What is the need of Kelvin Bridge?
4. Mention the circuit quality factor of Maxwell's bridge.
5. What is meant by electrostatic deflection in CRT?
6. Mention the significance of digital storage oscilloscopes.
7. State the capabilities of function generator.
8. What is the basic principle of wave analyzer?

9. Define Pen Recorder.

10. Write the features of LVDT.

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Discuss the PMMC galvanometer.

Or

(b) Explain the watt-hour meter.

12. (a) Elucidate the Schering's bridge.

Or

(b) Describe the Wein's bridge.

13. (a) Describe the electrostatic focusing.

Or

(b) Explain the digital storage oscilloscope.

14. (a) Describe the digital Voltmeter.

Or

(b) Enumerate the fundamentals of spectrum analyser.



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15. (a) Write a short note in resistance thermometer.

Or

(b) Give a brief account on audio tape recorder.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Describe the conversion of galvanometer into ammeter and voltmeter.

17. Explain the Maxwell's bridge.

18. Discuss the block diagram of oscilloscope.

19. Describe the electronic voltmeter and multimeter.

20. Explain the photoelectric transducer.

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